# STIC Search Report
## EIC 2600

Scientific & Technical Information Center
USPTO

## STIC Database Tracking Number: 94751

**TO: Suhan Ni**
**Location: PK2 8B45**
**Art Unit: 2643**
**Tuesday, January 27, 2004**

**Case Serial Number: 09/502258**

**From: Pamela Reynolds**
**Location: EIC 2600**
**PK2-3C03**
**Phone: 306-0255**

**Pamela.Reynolds@uspto.gov**

## Search Notes

Dear Suhan Ni,

Please find attached the search results for 09/502258. I used the search strategy I emailed to you to edit, not hearing from you I proceeded. I searched the standard Dialog files. I could not search the internet or other web databases because the network has been having problems for 2 days.

If you would like a re-focus please let me know.

Thank you.

Pamela Reynolds

sira
Search and Information Resources Administration

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File 344:Chinese Patents Abs Aug 1985-2003/Nov
         (c) 2003 European Patent Office
File 347:JAPIO Oct 1976-2003/Sep(Updated 040105)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200406
         (c) 2004  Thomson Derwent
? ds

Set     Items   Description
S1       4260   HEARING(3N)(AID OR DEVICE? OR APPARATUS OR UNIT??)
S2      15111   ANALOG(3N)DIGITAL()CONVERT?
S3      41702   MICROPHONE?? OR MICRO()PHONE??
S4        708   (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?(3N)(CASE??
            OR ENCLOSURE? OR ENCASEMENT?)
S5         59   S1 AND (MODULAR? OR DETACHABLE)
S6        157   (MOUNTED OR ATTACH? OR ADJOIN? OR JOIN? OR COUPL?) AND (OU-
            TSIDE OR OUT()SIDE OR EXTERNAL?) AND S2
S7          9   AU=(WUERSCH C? OR WUERSCH, C?)
S8          0   S6 AND S4
S9          0   S6 AND S1
S10         2   S6 AND (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?
S11        27   S1 AND S2
S12         3   S11 AND (ELECTROMAGNET? OR ELECTRO()MAGNET?)
S13         3   S12 NOT S10
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**10/3,K/1 (Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX


015491979
WPI Acc No: 2003-554126/200352
XRPX Acc No: N03-439935
**Production method of metal oxide coated substrate used for e.g. battery and telephone equipment, involves oxidizing reactant mixture formed at** external **and shield surfaces of substrate, rapidly at elevated temperature**
Patent Assignee: ENSCI INC (ENSC-N)
Inventor: CLOUGH T J
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 6555161 | B1 | 20030429 | US 2001861272 | A | 20010518 | 200352 | B |

Priority Applications (No Type Date): US 2001861272 A 20010518
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 6555161 | B1 | | 17 | B05D-007/00 | |

... **substrate used for e.g. battery and telephone equipment, involves oxidizing reactant mixture formed at** external **and shield surfaces of substrate, rapidly at elevated temperature**

Abstract (Basic):
... The **external** and shielded surfaces of a substrate, reacts with a metal oxide precursor, for forming a...
... oxides, chemical oxidation or reduction of carbon monoxide and hydrocarbon from internal combustion engine, oxidative **coupling** of methane to alkane and alkene, hydrocarbon reforming, hydrogenation of alkylaromatic to olefin, olefin to...

...hydrodecyclization, isomerization, ammoxidation and aldol condensation using aldehyde and carboxylic acid, and also used for **electromagnetic shielding** element, electrostatic dissipation element, battery, porous membrane, heating element, transducer used in surface acoustic wave...

...interference device (SQUID) used in biomedical, geophysical, submarine, air plane detection, infrared and microwave sensor, **analog** to **digital converter** , voltage standard, signal processor, microwave mixer, filter and amplifier...
...Title Terms: **EXTERNAL** ;

**10/3,K/2 (Item 2 from file: 350)**
DIALOG(R)File 350:Derwent WPIX


015491978
WPI Acc No: 2003-554125/200352
XRPX Acc No: N03-439934
**Metal oxide coating method for substrate used in battery, involves oxidizing reactant mixture formed on** external **and shielded surfaces of substrate, rapidly at high temperature**
Patent Assignee: ENSCI INC (ENSC-N)
Inventor: CLOUGH T J
Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 6555160 | B1 | 20030429 | US 2001861271 | A | 20010518 | 200352 | B |

Priority Applications (No Type Date): US 2001861271 A 20010518

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 6555160 | B1 | | 17 | B05D-007/00 | |

**Metal oxide coating method for substrate used in battery, involves oxidizing reactant mixture formed on** external **and shielded surfaces of substrate, rapidly at high temperature**

Abstract (Basic):

... A reactant mixture is obtained by reacting the **external** and shielded surfaces of a substrate with a metal oxide precursor. A metal oxide coating...

... of carbon monoxide and hydrocarbons, reducing carbon monoxide and hydrocarbon from internal combustion engine, oxidative **coupling** of methane to alkane and alkene, hydrocarbon reforming, dehydrogenation of alkylaromatic to olefin, olefin to...

...to ketone, hydrodecyclization, isomerization, ammoxidation, of olefin, aldol condensation, using aldehyde and carboxylic acid, for **electromagnetic shielding** element, electrostatic dissipation element, battery, porous membrane, heating element, transducer used in surface acoustic wave...

...interference device (SQUID) used in biomedical, geophysical, submarine, air plane detection, infrared and microwave sensor, **analog** to **digital converter** , voltage standard, signal processor, microwave mixer, filter and amplifier...

...Title Terms: **EXTERNAL** ;

?

**13/3,K/1 (Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX


015616415 **Image available**
WPI Acc No: 2003-678572/200364
XRAM Acc No: C03-185363
XRPX Acc No: N03-541752
Hearing aid , **for people suffering from** hearing **loss, comprises** hearing aid **shell with microphone, receiver, and amplifier and radio-frequency-attenuating material disposed within shell**
Patent Assignee: BERGER H S (BERG-I); CHOJAR S (CHOJ-I); FAZIO J (FAZI-I); GILMORE D (GILM-I)
Inventor: BERGER H S; CHOJAR S; FAZIO J; GILMORE D
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 20030123686 | A1 | 20030703 | US 97851655 | A | 19970505 | 200364 | B |

Priority Applications (No Type Date): US 97851655 A 19970505
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 20030123686 | A1 | | 16 | H04R-025/00 | |

Hearing aid , **for people suffering from** hearing **loss, comprises** hearing aid **shell with microphone, receiver, and amplifier and radio-frequency-attenuating material disposed within shell**

Abstract (Basic):
... **Hearing aid** comprises a **hearing aid** , shell (218); a microphone, a receiver (208), and an amplifier (204). The microphone, receiver, and
... An INDEPENDENT CLAIM is also included for a method of producing a **hearing aid** comprising placing a radio-frequency-attenuating material around a **hearing** aid component within a **hearing aid** shell...

...The **hearing aid** has an improved **electromagnetic** immunity...

...The figure shows a schematic diagram of the **hearing aid** .

Technology Focus:
... Preferred Component: The **hearing aid** comprises an **analog** -to- **digital converter** , a processor, and a digital-to-analog converter...

**13/3,K/2 (Item 2 from file: 350)**
DIALOG(R)File 350:Derwent WPIX


013258872 **Image available**
WPI Acc No: 2000-430755/200037
XRPX Acc No: N00-321456
Hearing aid **for converting analog/digital signals for a microphone includes a microphone device screen case with an acoustic input carrying a flexible foil coated with strip conductors for a converter's digital output.**
Patent Assignee: PHONAK AG (PHON-N)
Inventor: WUERSCH C

Number of Countries: 091 Number of Patents: 004
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 200022905 | A2 | 20000427 | WO 2000CH81 | A | 20000211 | 200037 | B |
| AU 200024270 | A | 20000508 | AU 200024270 | A | 20000211 | 200037 | |
| | | | WO 2000CH81 | A | 20000211 | | |
| EP 1264513 | A2 | 20021211 | EP 2000902525 | A | 20000211 | 200301 | |
| | | | WO 2000CH81 | A | 20000211 | | |
| JP 2003507909 | W | 20030225 | JP 2000576695 | A | 20000211 | 200317 | |
| | | | WO 2000CH81 | A | 20000211 | | |

Priority Applications (No Type Date): WO 2000CH81 A 20000211
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 200022905 | A2 | G | 9 | H04R-025/00 | |

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

| | | | | |
|---|---|---|---|---|
| AU 200024270 | A | | H04R-025/00 | Based on patent WO 200022905 |
| EP 1264513 | A2 | G | H04R-025/00 | Based on patent WO 200022905 |

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

| | | | | | |
|---|---|---|---|---|---|
| JP 2003507909 | W | | 14 | H04R-025/00 | Based on patent WO 200022905 |

Hearing aid **for converting analog/digital signals for a microphone includes a microphone device screen case with...**

Abstract (Basic):
... flexible foil (15) coated with strip conductors (17) for a converter's digital output. An **analog / digital converter** (16) is encapsulated with a thin screen on a metallised layer (17c) in the foil. The **analog / digital converter** is built inside the screen. Its analog input (EA) is fed into the case through...
... For screening out **electromagnetic** interference in hearing aids ...

...This device is modular and flexible in its possible uses. It has an **analog / digital converter** module for different applications with different microphone equipment. The module has two analog inputs, having...

...figure shows a cross-sectional drawing representing the construction of combined microphone equipment and an **analog / digital converter** for a microphone...

... **Analog / digital converter** (16

**13/3,K/3 (Item 3 from file: 350)**
DIALOG(R)File 350:Derwent WPIX


011142589 **Image available**
WPI Acc No: 1997-120513/199712
XRPX Acc No: N97-099143
**Digital** hearing aid **- has** analog **to** digital converter **included in microphone housing, which comprises screening arrangement pref. formed**

**of electrically conductive material**
Patent Assignee: SIEMENS AUDIOLOGISCHE TECH GMBH (SIEI )
Inventor: RAIMUND M; MARTIN R
Number of Countries: 004 Number of Patents: 005
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| DE 19545760 | C1 | 19970220 | DE 1045760 | A | 19951207 | 199712 | B |
| DK 9601391 | A | 19970608 | DK 961391 | A | 19961206 | 199739 | |
| US 5796848 | A | 19980818 | US 96761495 | A | 19961206 | 199840 | |
| DE 29521956 | U1 | 19981105 | DE 1045760 | A | 19951207 | 199850 | |
| | | | DE 95U2021956 | U | 19951207 | | |
| CH 689343 | A5 | 19990226 | CH 962488 | A | 19961014 | 199913 | |

Priority Applications (No Type Date): DE 1045760 A 19951207; DE 95U2021956 U 19951207
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| DE 19545760 | C1 | | 5 | H04R-025/00 | |
| DE 29521956 | U1 | | | H04R-025/00 | application DE 1045760 |
| DK 9601391 | A | | | H04R-025/00 | |
| US 5796848 | A | | | H04R-025/00 | |
| CH 689343 | A5 | | | H04R-025/00 | |

**Digital** hearing aid - ...

...**has** analog **to** digital converter **included in microphone housing, which comprises screening arrangement pref. formed of electrically conductive material**

...Abstract (Basic): The **hearing aid** comprises at least one microphone (1), a speaker (5), and a digital signal processing arrangement...

...a signal converter, an amplifier (3), as well as a filter arrangement (4,4'). An **analog** to **digital converter** (7) is included within the microphone housing (6...

...microphone housing pref. comprises a screening arrangement (9), that protects the components from high-frequency **electromagnetic** waves. The screening arrangement is pref. formed of electrically conductive material...

...ADVANTAGE - Provides **hearing aid** insensitive to **electromagnetic** radiation...
?

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File 348:EUROPEAN PATENTS 1978-2004/Jan W04
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040122,UT=20040115
         (c) 2004 WIPO/Univentio
? ds

Set     Items   Description
S1       2446   HEARING(3N)(AID OR DEVICE? OR APPARATUS OR UNIT??)
S2      23902   ANALOG(3N)DIGITAL()CONVERT?
S3      26059   MICROPHONE?? OR MICRO()PHONE??
S4        359   (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?(3N)(CASE??
              OR ENCLOSURE? OR ENCASEMENT?)
S5         51   S1(5N)(MODULAR? OR DETACHABLE)
S6         10   (MOUNTED OR ATTACH? OR ADJOIN? OR JOIN? OR COUPL?)(5N)(OUT-
              SIDE OR OUT()SIDE OR EXTERNAL?)(3N)S2
S7          4   AU=(WUERSCH C? OR WUERSCH, C?)
S8         10   S6 NOT S7
S9       7050   IC=H04R?
S10         0   S8 AND S9
S11         0   S8(S)S1
S12         0   S1(S)S4
S13         0   S1(S)S6
```

**7/3,K/1 (Item 1 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS


01160062
**HEARING AID COMPRISING A MICROPHONE ARRANGEMENT AND AN ANALOG-DIGITAL CONVERTER MODULE**
**HORGERAT MIT EINER MIKROPHONANORDNUNG SOWIE ANALOG/DIGITAL-WANDLERMODUL**
**APPAREIL DE CORRECTION AUDITIVE COMPORTANT UN ENSEMBLE MICROPHONE ET UN MODULE CONVERTISSEUR ANALOGIQUE/NUMERIQUE**
PATENT ASSIGNEE:
PHONAK AG, (776611), Laubisrutistrasse 28, 8712 Stafa, (CH), (Applicant designated States: all)
INVENTOR:
**WUERSCH, Christoph** , Stadtli 13, CH-9470 Werdenberg, (CH
LEGAL REPRESENTATIVE:
Troesch Scheidegger Werner AG (101092), Schwantenmos 14, 8126 Zumikon, (CH)
PATENT (CC, No, Kind, Date): EP 1264513 A2 021211 (Basic)
WO 2000022905 000427
APPLICATION (CC, No, Date): EP 2000902525 000211; WO 2000CH81 000211
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04R-025/00; H03M-001/12
NOTE:
No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): German; German; German

INVENTOR:
**WUERSCH, Christoph** ...

**7/3,K/2 (Item 2 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS


01105451
**ENERGY STORAGE UNIT, PREFERABLY FOR A HEARING AID, METHOD FOR CHARGING SAID ENERGY STORAGE UNIT, AND A DEVICE FOR CARRYING OUT THE METHOD**
**ENERGIESPEICHEREINHEIT, VORZUGSWEISE FUR EIN HORGERAT, VERFAHREN UND VORRICHTUNG ZUM AUFLADEN DER ENERGIESPEICHEREINHEIT**
**UNITE DE STOCKAGE D'ENERGIE, DE PREFERENCE POUR UN APPAREIL AUDITIF, PROCEDE POUR CHARGER CETTE UNITE DE STOCKAGE D'ENERGIE ET DISPOSITIF POUR METTRE EN OEUVRE LEDIT PROCEDE**
PATENT ASSIGNEE:
PHONAK AG, (776611), Laubisrutistrasse 28, 8712 Stafa, (CH), (Applicant designated States: all)
INVENTOR:
**WUERSCH, Christoph** , Hauptstrasse 43, CH-8867 Niederurnen, (CH)
VAN OERLE, Gerard, Guschstrasse 50, CH-8610 Uster, (CH
PATENT (CC, No, Kind, Date):
WO 99055131 991104
APPLICATION (CC, No, Date): EP 99939895 990908; WO 99CH421 990908
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: H04R-025/00; H02J-007/00; H01M-002/10
LANGUAGE (Publication,Procedural,Application): German; German; German
INVENTOR:
**WUERSCH, Christoph** ...

**7/3,K/3 (Item 1 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT


00559532 **Image available**

**HEARING AID COMPRISING A MICROPHONE ARRANGEMENT AND AN ANALOG-DIGITAL CONVERTER MODULE**

**APPAREIL DE CORRECTION AUDITIVE COMPORTANT UN ENSEMBLE MICROPHONE ET UN MODULE CONVERTISSEUR ANALOGIQUE/NUMERIQUE**

Patent Applicant/Assignee:
PHONAK AG,
WUERSCH Christoph,

Inventor(s):
**WUERSCH Christoph**

Patent and Priority Information (Country, Number, Date):
Patent: WO 200022905 A2 20000427 (WO 0022905)
Application: WO 2000CH81 20000211 (PCT/WO CH0000081)
Priority Application: WO 2000CH81 20000211

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: German
Fulltext Word Count: 959

Inventor(s):
**WUERSCH Christoph ...**

**7/3,K/4 (Item 2 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT


00523779 **Image available**

**ENERGY STORAGE UNIT, PREFERABLY FOR A HEARING AID, METHOD FOR CHARGING SAID ENERGY STORAGE UNIT, AND A DEVICE FOR CARRYING OUT THE METHOD**

**UNITE DE STOCKAGE D'ENERGIE, DE PREFERENCE POUR UN APPAREIL AUDITIF, PROCEDE POUR CHARGER CETTE UNITE DE STOCKAGE D'ENERGIE ET DISPOSITIF POUR METTRE EN OEUVRE LEDIT PROCEDE**

Patent Applicant/Assignee:
PHONAK AG,
WUERSCH Christoph,
VAN OERLE Gerard,

Inventor(s):
**WUERSCH Christoph ,**
VAN OERLE Gerard

Patent and Priority Information (Country, Number, Date):
Patent: WO 9955131 A2 19991104
Application: WO 99CH421 19990908 (PCT/WO CH9900421)
Priority Application: WO 99CH421 19990908

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: German
Fulltext Word Count: 3106

Inventor(s):
**WUERSCH Christoph** ...
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File   2:INSPEC 1969-2004/Jan W3
         (c) 2004 Institution of Electrical Engineers
File   6:NTIS 1964-2004/Jan W4
         (c) 2004 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2004/Jan W3
         (c) 2004 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2004/Jan W3
         (c) 2004 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2004/Dec
         (c) 2004 ProQuest Info&Learning
File  65:Inside Conferences 1993-2004/Jan W4
         (c) 2004 BLDSC all rts. reserv.
File  94:JICST-EPlus 1985-2004/Jan W3
         (c)2004 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2004/Jan W2
         (c) 2004 FIZ TECHNIK
File  99:Wilson Appl. Sci & Tech Abs 1983-2004/Dec
         (c) 2004 The HW Wilson Co.
File 144:Pascal 1973-2004/Jan W3
         (c) 2004 INIST/CNRS
File 233:Internet & Personal Comp. Abs. 1981-2003/Sep
         (c) 2003 EBSCO Pub.
File 239:Mathsci 1940-2003/Feb
         (c) 2003 American Mathematical Society
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
         (c) 2002 The Gale Group
File 603:Newspaper Abstracts 1984-1988
         (c)2001 ProQuest Info&Learning
File 483:Newspaper Abs Daily 1986-2004/Jan 26
         (c) 2004 ProQuest Info&Learning
? ds

Set     Items   Description
S1       8724   HEARING(3N)(AID OR DEVICE? OR APPARATUS OR UNIT??)
S2      17418   ANALOG(3N)DIGITAL()CONVERT?
S3      30709   MICROPHONE?? OR MICRO()PHONE??
S4        422   (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?(3N)(CASE??
            OR ENCLOSURE? OR ENCASEMENT?)
S5         16   S1 AND (MODULAR? OR DETACHABLE)
S6         42   (MOUNTED OR ATTACH? OR ADJOIN? OR JOIN? OR COUPL?) AND (OU-
            TSIDE OR OUT()SIDE OR EXTERNAL?) AND S2
S7         14   AU=(WUERSCH C? OR WUERSCH, C?)
S8          0   S1 AND S6
S9          0   S4 AND S6
S10         0   S1 AND S4
S11       228   S1 AND (ELECTROMAGNET? OR ELECTRO()MAGNET?)
S12         0   S11 AND S2
S13        79   S11 AND INTERFERENCE
S14         1   S13 AND SHIELD?
S15         0   S2 AND S4
S16         0   S1 AND S7
```

**14/3,K/1 (Item 1 from file: 8)**
DIALOG(R)File 8:Ei Compendex(R)


04760992 E.I. No: EIP97073738994
**Title: Professional Program Proceedings of the Electronics Industries Forum**
Author: Anon (Ed.)
Conference Title: Professional Program Proceedings of the Electronics Industries Forum
Conference Location: Boston, MA, USA Conference Date: 19970506-19970508
E.I. Conference No.: 46652
Source: Professional Program Proceedings of the Electronics Industries Forum 1997. IEEE, Piscataway, NJ, USA,97CH36084. 301p
Publication Year: 1997
CODEN: 002622
Language: English

Abstract: The proceedings contains 16 papers from the 1997 Electronics Industries Forum. Topics discussed include: **hearing aid** -wireless **device** compatibility; electromechanical device disassembly; **electromagnetic shielding** ; heat sink design; fractal antennas; flow switching networks; tag switching; product development; virtual prototypes; photonic device packaging automation; medical devices; **electromagnetic interference** ; multistage switching networks; surface mount technology course outline; radio frequency power amplifiers; product design standards ...
Descriptors: Electronics industry; Telephone **hearing** aids; Electromechanical **devices** ; Radiation **shielding** ; Fins (heat exchange); Traveling wave antennas; Asynchronous transfer mode; Radio frequency amplifiers; Product design; Process...
Identifiers: **Hearing aid** compatible cellular telephones; End-of-life disassembly; **Electromagnetic shielding** standards; Optimum heat sink design; Fractal antennas; Flow switching networks; Tag switching; Virtual prototypes; Photonics...
?

File 9:Business & Industry(R) Jul/1994-2004/Jan 26
(c) 2004 Resp. DB Svcs.
File 15:ABI/Inform(R) 1971-2004/Jan 24
(c) 2004 ProQuest Info&Learning
File 16:Gale Group PROMT(R) 1990-2004/Jan 26
(c) 2004 The Gale Group
File 20:Dialog Global Reporter 1997-2004/Jan 27
(c) 2004 The Dialog Corp.
File 47:Gale Group Magazine DB(TM) 1959-2004/Jan 26
(c) 2004 The Gale group
File 75:TGG Management Contents(R) 86-2004/Jan W3
(c) 2004 The Gale Group
File 80:TGG Aerospace/Def.Mkts(R) 1986-2004/Jan 26
(c) 2004 The Gale Group
File 88:Gale Group Business A.R.T.S. 1976-2004/Jan 27
(c) 2004 The Gale Group
File 98:General Sci Abs/Full-Text 1984-2004/Dec
(c) 2004 The HW Wilson Co.
File 112:UBM Industry News 1998-2004/Jan 27
(c) 2004 United Business Media
File 141:Readers Guide 1983-2004/Dec
(c) 2004 The HW Wilson Co
File 148:Gale Group Trade & Industry DB 1976-2004/Jan 26
(c)2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2004/Jan 26
(c) 2004 The Gale Group
File 264:DIALOG Defense Newsletters 1989-2004/Jan 15
(c) 2004 The Dialog Corp.
File 484:Periodical Abs Plustext 1986-2004/Jan W3
(c) 2004 ProQuest
File 553:Wilson Bus. Abs. FullText 1982-2004/Dec
(c) 2004 The HW Wilson Co
File 570:Gale Group MARS(R) 1984-2004/Jan 26
(c) 2004 The Gale Group
File 608:KR/T Bus.News. 1992-2004/Jan 27
(c)2004 Knight Ridder/Tribune Bus News
File 620:EIU:Viewswire 2004/Jan 25
(c) 2004 Economist Intelligence Unit
File 613:PR Newswire 1999-2004/Jan 27
(c) 2004 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jan 26
(c) 2004 The Gale Group
File 623:Business Week 1985-2004/Jan 26
(c) 2004 The McGraw-Hill Companies Inc
File 624:McGraw-Hill Publications 1985-2004/Jan 26
(c) 2004 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2004/Jan 26
(c) 2004 San Jose Mercury News
File 635:Business Dateline(R) 1985-2004/Jan 24
(c) 2004 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2004/Jan 26
(c) 2004 The Gale Group
File 647:CMP Computer Fulltext 1988-2004/Jan W3
(c) 2004 CMP Media, LLC
File 696:DIALOG Telecom. Newsletters 1995-2004/Jan 15
(c) 2004 The Dialog Corp.
File 674:Computer News Fulltext 1989-2004/Jan W3
(c) 2004 IDG Communications
File 810:Business Wire 1986-1999/Feb 28

```
         (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
? ds

Set     Items   Description
S1      25234   HEARING(3N)(AID OR DEVICE? OR APPARATUS OR UNIT??)
S2      16129   ANALOG(3N)DIGITAL()CONVERT?
S3     141419   MICROPHONE?? OR MICRO()PHONE??
S4        163   (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?(3N)(CASE??
                 OR ENCLOSURE? OR ENCASEMENT?)
S5         20   S1(5N)(MODULAR? OR DETACHABLE)
S6          2   (MOUNTED OR ATTACH? OR ADJOIN? OR JOIN? OR COUPL?)(5N)(OUT-
                SIDE OR OUT()SIDE OR EXTERNAL?)(3N)S2
S7          0   AU=(WUERSCH C? OR WUERSCH, C?)
S8          1   RD S6 (unique items)
S9          0   S4(S)S5
S10         2   S1(S)S4
S11         2   S10 NOT S6
S12         1   RD S11 (unique items)
S13         0   S2(S)S4
```

**8/3,K/1 (Item 1 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)


09337861 Supplier Number: 81529004 (USE FORMAT 7 FOR FULLTEXT)
**How to Record own Song: Step By Step, Here's How To Create And Capture Original Music on Your Computer. (Start Up).**
Nelson, Mark
Electronic Musician, v18, n2, p14(8)
Feb, 2002
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 5088

... invest in an interface designed for recording instead. Pros prefer interfaces with the connectors and **analog** -to- **digital converters** (ADCs) **mounted** in an **external** box, because they're more convenient and less likely to pick up electrical noise from...
?

**12/3,K/1 (Item 1 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)


02954997 Supplier Number: 43999270 (USE FORMAT 7 FOR FULLTEXT)
**BEDDALL INITIATES GSM INTERFERENCE STUDY**
Exchange, v5, n28, pN/A
July 30, 1993
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 795

... heads TRL's Electromagnetic Compatibility Section and is Chairman of the government sub-committee examining **hearing aid** interference, has identified a conductive plastic case which he said could be fitted to existing hearing aids and new models. The **case shields** hearing aids from **electromagnetic** interference and is to be tested intensively by Telecom Research within the next three to...
?

```
File   5:Biosis Previews(R) 1969-2004/Jan W3
         (c) 2004 BIOSIS
File  73:EMBASE 1974-2004/Jan W3
         (c) 2004 Elsevier Science B.V.
File 155:MEDLINE(R) 1966-2004/Jan W3
         (c) format only 2004 The Dialog Corp.
File 172:EMBASE Alert 2004/Jan W4
         (c) 2004 Elsevier Science B.V.
File 188:Health Devices Sourcebook 2002
         ECRI (A nonprofit agency)
File 198:Health Devices Alerts(R) 1977-2004/Jan W4
         (c) 2004 ECRI-nonprft agncy
? ds

Set     Items   Description
S1       9874   HEARING(3N)(AID OR DEVICE? OR APPARATUS OR UNIT??)
S2        800   ANALOG(3N)DIGITAL()CONVERT?
S3       3740   MICROPHONE?? OR MICRO()PHONE??
S4          0   (ELECTROMAGNET? OR ELECTRO()MAGNET?)(3N)SHIELD?(3N)(CASE??
              OR ENCLOSURE? OR ENCASEMENT?)
S5         12   S1 AND (MODULAR? OR DETACHABLE)
S6          7   (MOUNTED OR ATTACH? OR ADJOIN? OR JOIN? OR COUPL?) AND (OU-
              TSIDE OR OUT()SIDE OR EXTERNAL?) AND S2
S7          0   AU=(WUERSCH C? OR WUERSCH, C?)
S8          0   S1 AND S6
S9          0   S4 AND S6
S10         0   S1 AND S4
S11       169   S1 AND (ELECTROMAGNET? OR ELECTRO()MAGNET?)
S12         2   S11 AND S2
S13        24   S11 AND INTERFERENCE
S14         3   S13 AND SHIELD?
S15         0   S2 AND S4
S16         0   S1 AND S7
S17         2   RD S14 (unique items)
S18         7   S6 NOT S17
S19         7   RD S18 (unique items)
S20         2   S12 NOT (S17 OR S6)
S21         1   RD S20 (unique items)
S22        19   S13 NOT (S6 OR S12 OR S14)
S23        12   RD S22 (unique items)
```

**17/3,K/1 (Item 1 from file: 73)**
DIALOG(R)File 73:EMBASE


11380642 EMBASE No: 2001395359
**Wireless telephone-** hearing aid electromagnetic **compatibility research at the University of Oklahoma**
Schlegel R.E.; Ravindran A.; Raman S.; Grant H.
R.E. Schlegel, School of Industrial Engineering, University of Oklahoma, Ctr. Study Wireless Electromagnetic, 202 W. Boyd, Norman, OK 73019-1022 United States
Journal of the American Academy of Audiology ( J. AM. ACAD. AUDIOL. ) ( Canada) 2001, 12/6 (301-308)
CODEN: JAAAE ISSN: 1050-0545
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 10

**Wireless telephone-** hearing aid electromagnetic **compatibility research at the University of Oklahoma**

A multiphase study examining **electromagnetic** compatibility (EMC) between wireless digital telephones and hearing aids has been under way at the...
...of Oklahoma EMC Center since May 1995. In a phase 1 clinical study involving 68 **hearing aid** wearers, **interference** varied significantly by telephone technology, **hearing aid** type, and **hearing** loss characteristics. More than 80 percent of the tests resulted in either no **interference** or a detection threshold distance less than 1 meter. Metallic **shielding** of the units yielded positive results. Various elements of phase 2 involved instrument-based tests of **hearing** aid interference using telephones in a sound-isolation chamber and radio frequency signals in a waveguide, along with clinical studies of speech-to- **interference** ratios, all leading to the development of standards of measurement and performance criteria for telephone emissions and **hearing aid** immunity. Results to date confirm that bystander **interference** is of less concern than user **interference** , which is the focus of continuing research.
MEDICAL DESCRIPTORS:
*telephone; * **hearing aid**
**electromagnetic** field; research; university; **United** States; technology; **hearing** loss--therapy--th; instrument; sound; telecommunication; speech discrimination; standardization; measurement; performance; immunity; human; major clinical...

**17/3,K/2 (Item 2 from file: 73)**
DIALOG(R)File 73:EMBASE


07270928 EMBASE No: 1998175611
**Radiofrequency** interference **with medical devices: A technical information statement**
IEEE Engineering in Medicine and Biology Magazine ( IEEE ENG. MED. BIOL. MAG. ) (United States) 1998, 17/3 (111-114)
CODEN: IEMBD ISSN: 0739-5175
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 28

**Radiofrequency** interference **with medical devices: A technical**

**information statement**

...correctly because of interferences from various emitters of radiofrequency energy. This condition is called radiofrequency **interference** (RFI). The consequences of these failures range from inconvenience to serious injuries and death. Reasons...

...the 3 V/m level specified in present RFI standards. Most of these techniques including **shielding** , grounding, and filtering, are not costly if thy are incorporated into the initial design of...
MEDICAL DESCRIPTORS:
radiofrequency; telephone; food and drug administration; monitor; **electromagnetic** field; pacemaker; **hearing aid** ; defibrillator; amplitude modulation; review
?

**19/3,K/1 (Item 1 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)


0013272479 BIOSIS NO.: 200100444318
**Portable medical gas system tester**
AUTHOR: Scott George L (Reprint)
AUTHOR ADDRESS: So. Salem, NY, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1248 (5): July 31, 2001 2001
MEDIUM: e-file
PATENT NUMBER: US 6266995 PATENT DATE GRANTED: July 31, 2001 20010731
PATENT CLASSIFICATION: 73-232 PATENT ASSIGNEE: Respiratory Management Services, Inc., Bedford Hills, NY, USA PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: and carbon dioxide/oxygen mixtures. The device has a computer, a digital display device, an **analog** to **digital converter** , a gas sensor, a pressure and vacuum transducer **coupled** to the gas sensor, and an oxygen transducer **coupled** to the gas sensor, an exhaust outlet for venting excess gases to **outside** of the device's case, a bi-directional flow sensor **coupled** to gas sensor, and a flow transducer **coupled** to the flow sensor. The computer analyzes and interprets the electrical signals relative to predetermined...

**19/3,K/2 (Item 1 from file: 73)**
DIALOG(R)File 73:EMBASE


10827850 EMBASE No: 2000308369
**From external to internal measurement: A form theory approach to evolution**
Andrade E.
E. Andrade, Departamento de Biologia, Universidad Nacional de Colombia, Santa Fe de Bogota, D.C. Colombia
AUTHOR EMAIL: eandrade@ciencias.ciencias.unal.edu.co
BioSystems ( BIOSYSTEMS ) (Ireland) 2000, 57/1 (49-62)
CODEN: BSYMB ISSN: 0303-2647
PUBLISHER ITEM IDENTIFIER: S0303264700000824
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 42

**From external to internal measurement: A form theory approach to evolution**

The point of view of **external** observers has led to an explanation of life based on digitally encoded information. In contrast...

...to the changes of perspective, so as to speak, if measurement is considered to be **external** or internal. Equilibrium theories developed for closed systems under ideal conditions are analogous to **external** measurements. On the other hand, morphogenetic perspectives as far from equilibrium thermodynamics applicable to open...

...Schuster. Therefore, interactions between living entities are seen as

reciprocal measurement processes that bring about **couplings** (shortened descriptions and local decreases of entropy) that are paid by partial record erasure (increase...
MEDICAL DESCRIPTORS:
algorithm; thermodynamics; **analog digital converter** ; natural selection; review

**19/3,K/3 (Item 2 from file: 73)**
DIALOG(R)File 73:EMBASE


10749223 EMBASE No: 2000229294
**A telemetry system for the study of spontaneous cardiac arrhythmias**
Rollins D.L.; Killingsworth C.R.; Walcott G.P.; Justice R.K.; Ideker R.E.; Smith W.M.
D.L. Rollins, Cardiac Rhythm Management Laboratory, Department of Medicine, University of Alabama, 1670 University Boulevard, Birmingham, AL 35294 United States
AUTHOR EMAIL: dlr@crml.uab.edu
IEEE Transactions on Biomedical Engineering ( IEEE TRANS. BIOMED. ENG. ) (United States) 2000, 47/7 (887-892)
CODEN: IEBEA ISSN: 0018-9294
PUBLISHER ITEM IDENTIFIER: S0018929400051284
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 16

...connected in a unipolar manner. Each channel has a gain of fifty and is AC **coupled** , band limited to 0.07-260 Hz. The signals are digitized with 12 bits resolution at 1000 samples/s. The amplifiers, **analog** -to-**digital converter** , and control logic are packaged in an implantable unit. An umbilical cable is passed through the skin to an **external** backpack unit for power and data transmission. A custom serial interface card, a PC/104...

**19/3,K/4 (Item 3 from file: 73)**
DIALOG(R)File 73:EMBASE


06667561 EMBASE No: 1996332442
**Development of a high permeability cored transintegumental power transformer**
Helmicki A.J.; Melvin D.M.; Henderson H.T.; Nebrigic D.; Venkat R.; Glos D.L.
ECECS Department, University of Cincinnati,Cincinnati, OH 45221-0030 United States
ASAIO Journal ( ASAIO J. ) (United States) 1996, 42/5 (M624-M629)
CODEN: AJOUE ISSN: 1058-2916
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...of this power via transcutaneous transformers, with the secondary implanted subcutaneously and the primary worn **externally** . Because these devices are air cored, they have relatively large, bulky **external** appliances, poor coil to coil **coupling** , and result in significant stray fields passing through adjacent tissues. This article reports on the...
MEDICAL DESCRIPTORS:
**analog digital converter** ; article; dog; functional anatomy;

mathematical model; membrane permeability; nonhuman; technical aid

**19/3,K/5 (Item 4 from file: 73)**
DIALOG(R)File 73:EMBASE


05733908 EMBASE No: 1994151486
**A computerized data acquisition system for quantitative assessment of knee stability**
Al-Turaiki M.H.S.; Bukhari A.R.S.
JCRPORP, P.O. Box 27240,Riyadh 11417 Saudi Arabia
Journal of Clinical Engineering ( J. CLIN. ENG. ) (United States) 1994, 19/2 (135-142)
CODEN: JCEND ISSN: 0363-8855
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...applied manually to perform anterior-posterior drawer sign test, valgus- varus rotation test and internal- **external** tibial torsion test. Load and displacement transducers are placed at appropriate positions and are connected to a microcomputer through an **analog** -to- **digital converter** . The load versus linear displacement (or torque versus angular displacement) curve, which is in the...
MEDICAL DESCRIPTORS:
article; compliance (physical); computer system; functional assessment; human; information processing; **joint** laxity--diagnosis--di; **joint** stiffness--diagnosis--di; knee function; quantitative diagnosis

**19/3,K/6 (Item 5 from file: 73)**
DIALOG(R)File 73:EMBASE


05687907 EMBASE No: 1994105447
**Early detection of delayed union in lower leg fractures using a computerised analysis of mechanical vibration reactions of bone for assessing the state of fracture healing**
Fellinger M.; Leitgeb N.; Szyszkowitz R.; Peicha G.; Passler J.; Seggl W. ; Schanner A.
University Clinic of Surgery, Department of Traumatology, Technical University, Auenbruggerplatz 1,A-8036 Graz Austria
Archives of Orthopaedic and Trauma Surgery ( ARCH. ORTHOP. TRAUMA SURG. ) (Germany) 1994, 113/2 (93-96)
CODEN: AOTSE ISSN: 0936-8051
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...measuring system is composed of two sound transducers, an amplifier module and an AD converter **attached** to a PC. The assessment of 150 healthy individuals as well as an initial measuring series after treatment of tibial fractures with an **external** fixator system revealed highly significant differences between intact and fractured tibias. Thus, computerised sonometry is...
MEDICAL DESCRIPTORS:
amplifier; **analog digital converter** ; article; clinical article; controlled study; early diagnosis; fracture **external** fixation; functional assessment; human; microcomputer; microphone; normal human; priority journal; sound detection; tibia fracture

**19/3,K/7 (Item 1 from file: 155)**
DIALOG(R)File 155:MEDLINE(R)


14532580 22339968 PMID: 12451806
**Image acquisition and image processing for the intraocular vision aid.**
Krisch I; Hijazi N; Hosticka B J
Fraunhofer Institute for Microelectronic Circuits and Systems, 47057 Duisburg, Germany. krisch@ims.fhg.de
Biomedizinische Technik. Biomedical engineering (Germany) 2002, 47 Suppl 1 Pt 1 p171-3, ISSN 0013-5585 Journal Code: 1262533
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... sensor stands out for low power consumption, random pixel access, and local brightness adaptation. An **analog - digital - converter** allows direct **coupling** to an **external** signal processor or a monolithically integrated unit for image processing to compress data.
?

21/3,K/1 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE


11380637 EMBASE No: 2001395354
**Field measurements of** electromagnetic **interference in hearing aids**
Levitt H.; Harkins J.; Singer B.; Yeung E.
H. Levitt, 998 Sea Eagle Loop, Bodega Bay, CA 94923-0610 United States
Journal of the American Academy of Audiology ( J. AM. ACAD. AUDIOL. ) ( Canada) 2001, 12/6 (275-280)
CODEN: JAAAE ISSN: 1050-0545
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 2

**Field measure**ments of electromagnetic **interference in hearing aids**

This investigation was a preliminary field study to determine the acoustic and perceptual characteristics of **hearing aid** distortion generated by digital wireless telephones, the usability of the telephones under field conditions, and the extent of bystander interference under field conditions. A two-channel **analog** -to- **digital converter** was used to monitor voltages generated by an acoustic (real-ear) and **electro**magnetic probe. Digital recordings of interference and speech plus interference were made on a laptop computer. Fifty-three **hearing aid** wearers listened to interference and speech plus interference through personal communication service 1900 and time...
MEDICAL DESCRIPTORS:
* **electromagnetic** field; * **hearing aid** measurement; acoustics; perception; telephone; monitoring; ear; **analog digital converter** ; recording; speech discrimination; computer; interpersonal communication; rating scale; annoyance; sample; human; major clinical study; controlled...
?

**23/3,K/1 (Item 1 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)


0014284643 BIOSIS NO.: 200300243362
Hearing aid **users benefit from induction loop when using digital cellular phones.**
AUTHOR: Sorri Martti (Reprint); Piiparinen Peeta; Huttunen Kerttu; Haho Mikko; Tobey Emily; Thibodeau Linda; Buckley Kristi
AUTHOR ADDRESS: Department of Otorhinolaryngology, Oulun Yliopisto, FIN-90014, P.O. Box 5000, Oulu, Finland**Finland
AUTHOR E-MAIL ADDRESS: martti.sorri@oulu.fi
JOURNAL: Ear and Hearing 24 (2): p119-132 April 2003 2003
MEDIUM: print
ISSN:-0196-0202
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Hearing aid **users benefit from induction loop when using digital cellular phones.**

ABSTRACT: Objective: **Hearing aid** users have recently been reported to experience problems with **electromagnetic interference** when using digital cellular phones. This study was undertaken to investigate the possible benefit of...

...benefit in two languages (Finnish and American English) as well as the benefit with two **hearing aid** technologies (analog versus digital). Design: The study was performed in controlled laboratory conditions at two...
DESCRIPTORS:
...ORGANISMS: patient, **hearing aid** user
METHODS & EQUIPMENT: **hearing aid** --
MISCELLANEOUS TERMS: ... **electromagnetic interference** ;

**23/3,K/2 (Item 2 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)


0014226311 BIOSIS NO.: 200300185030
**Hearing aids and digital wireless telephones.**
AUTHOR: Preves David (Reprint)
AUTHOR ADDRESS: Micro-Tech Hearing Instruments, 3500 Holly Lane No., Suite 10, Plymouth, MN, 55447, USA**USA
AUTHOR E-MAIL ADDRESS: dpreves@mthearing.com
JOURNAL: Seminars in Hearing 24 (1): p43-62 February 2003 2003
MEDIUM: print
ISSN: 0734-0451
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Citation
LANGUAGE: English

DESCRIPTORS:
METHODS & EQUIPMENT: **hearing aid** --...

...Gigahertz Transversal **Electromagnetic** Mode cell test method {GTEM cell test method
MISCELLANEOUS TERMS: ... **electromagnetic** noise...

... **hearing aid** compatibility...
...input-referred **interference** level (IRIL

**23/3,K/3 (Item 1 from file: 73)**
DIALOG(R)File 73:EMBASE


12008872 EMBASE No: 2003119408
**Telecoils: Principles, pitfalls, fixes, and the future**
Yanz J.L.; Preves D.
Dr. J.L. Yanz, Micro-Tech Hearing Instruments, Inc., 3500 Holly Lane North, Plymouth, MN 55447 United States
AUTHOR EMAIL: jyanz@hearing-aid.com
Seminars in Hearing ( SEMIN. HEAR. ) (United States) 2003, 24/1 (29-41)
CODEN: SEMHE ISSN: 0734-0451
DOCUMENT TYPE: Journal ; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 25

...reduced acoustic feedback and environmental noise problems. Inductive coupling, however, may have difficult-to-remove **interference** pickup from **electromagnetic** signals produced by common objects. In recent years, the effectiveness of inductive coupling has been...

...memory for telephone use, and knowledge of how to best position the telecoil within the **hearing aid** . Innovative features such as the automatic telecoil switch have made listening via telecoil even easier...
MEDICAL DESCRIPTORS:
* **hearing aid** ; *telephone
**electromagnetic** radiation; electrical equipment; magnetism; amplifier; technology; review

**23/3,K/4 (Item 2 from file: 73)**
DIALOG(R)File 73:EMBASE


11727681 EMBASE No: 2002300662
Electromagnetic interference **of bone-anchored hearing aids by cellular phones revisited**
Kompis M.; Hausler R.
Dr. M. Kompis, Department of ENT, Inselspital, University of Berne, CH-3010 Berne Switzerland
AUTHOR EMAIL: martin.kompis@insel.ch
Acta Oto-Laryngologica ( ACTA OTO-LARYNGOL. ) (Norway) 2002, 122/5 (510-512)
CODEN: AOLAA ISSN: 0001-6489
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 5

Electromagnetic interference **of bone-anchored hearing aids by cellular phones revisited**

The **electromagnetic interference** of the recently introduced bone-anchored **hearing aid** (BAHA) model "BAHA Compact" by digital cellular phones is investigated and compared with that of...
...different digital cellular phones in a laboratory setting indicated that

the noise level due to **electromagnetic interference** was at least 10 dB lower for the BAHA Compact device than for the BAHA...

...in the vicinity used a digital cellular phone. These findings confirm that the susceptibility to **electromagnetic interference** of the BAHA Compact device is low.
MEDICAL DESCRIPTORS:
* **electromagnetic** radiation; * **hearing aid** ; *telephone

**23/3,K/5 (Item 3 from file: 73)**
DIALOG(R)File 73:EMBASE


11380645 EMBASE No: 2001395362
**The nature of** electromagnetic interference
Levitt H.
H. Levitt, 998 Sea Eagle Loop, Bodega Bay, CA 94923-0610 United States
Journal of the American Academy of Audiology ( J. AM. ACAD. AUDIOL. ) ( Canada) 2001, 12/6 (322-326)
CODEN: JAAAE ISSN: 1050-0545
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 4

**The nature of** electromagnetic interference

This report provides a brief tutorial on the underlying physical forces that lead to **interference** with hearing aids and assistive listening devices, as well as measurement issues and possible solutions...
MEDICAL DESCRIPTORS:
* **electromagnetic** field
physical parameters; **hearing aid** ; **device** ; measurement; article; priority journal

**23/3,K/6 (Item 4 from file: 73)**
DIALOG(R)File 73:EMBASE


11380639 EMBASE No: 2001395356
**Wireless telephones and hearing aids: An overview**
Ross M.
M. Ross, 9 Thomas Drive, Storrs, CT 06268 United States
Journal of the American Academy of Audiology ( J. AM. ACAD. AUDIOL. ) ( Canada) 2001, 12/6 (286-289)
CODEN: JAAAE ISSN: 1050-0545
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 3

...aids and may actively interfere with the normal use of hearing aids because of the **electromagnetic interference** (EMI) generated by wireless telephones. The EMI generated by digital wireless telephones is much greater...
MEDICAL DESCRIPTORS:
*telephone; * **hearing aid**
futurology; **electromagnetic** field; research; article; priority journal

**23/3,K/7 (Item 5 from file: 73)**
DIALOG(R)File 73:EMBASE


11186036 EMBASE No: 2001201670
Electromagnetic interference **of bone-anchored hearing aids by cellular phones**
Kompis M.; Negri S.; Hausler R.
Dr. M. Kompis, Univ. Clin. of ENT Head/Neck Surgery, Inselspital, CH-3010 Berne Switzerland
AUTHOR EMAIL: martin.kompis@insel.ch
Acta Oto-Laryngologica ( ACTA OTO-LARYNGOL. ) (Norway) 2000, 120/7 (855-859)
CODEN: AOLAA ISSN: 0001-6489
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 10

Electromagnetic interference **of bone-anchored hearing aids by cellular phones**

We report a case of **electromagnetic interference** between a bone-anchored **hearing aid** (BAHA) and a cellular phone. A 54-year-old women was successfully treated for severe...
...phone. During a subsequent experiment, the buzzing sound could be reproduced and was identified as **electromagnetic interference** between the BAHA and digital cellular phones. Seventeen adult BAHA users from our clinic participated...

...the increasing number of users of both hearing aids and cellular phones, the incidence of **electromagnetic interference** must be expected to increase as well. Although to date there is no evidence that such **interference** may be harmful or dangerous to users of conventional or bone-anchored hearing aids, unexpected **interference** can be a frightening experience.
MEDICAL DESCRIPTORS:
* **electromagnetic** field; * **hearing aid** ; *telephone

**23/3,K/8 (Item 6 from file: 73)**
DIALOG(R)File 73:EMBASE


07292912 EMBASE No: 1998194539
Hearing aid electromagnetic interference **from digital wireless telephones**
Skopec M.
M. Skopec, Ctr. for Devices/Radiological Hlth., Food and Drug Administration, Rockville, MD 20852 United States
IEEE Transactions on Rehabilitation Engineering ( IEEE TRANS. REHABIL. ENG. ) (United States) 1998, 6/2 (235-239)
CODEN: IEERE ISSN: 1063-6528
PUBLISHER ITEM IDENTIFIER: S1063652898043080
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 5

Hearing aid electromagnetic interference **from digital wireless telephones**

...in-the-ear (ITE) and behind-the-ear (BTE) hearing aids were tested for audible **interference** at various distances from five types of digital wireless telephones. The **interference** which takes the form of a buzzing and a static sound was quantified using a...
...system including a frequency analyzer and a pressure field microphone. The output of the each **hearing aid** was coupled to the microphone via Tygon tubing and a standard 2 cc coupler. The highest **interference** -induced sound pressure level (SPL), 122.5 dB, was measured from a BTE **hearing aid** placed within 2 cm of a transmitting Global System for Mobile Communications (GSM) phone. In this case, **interference** was detected up to a separation distance of almost 3 m. While all phones tested produced a similar **interference** level within 2 cm of this **hearing aid** , **interference** SPL from the code division multiple access (CDMA)-based system decreased more rapidly with distance...
MEDICAL DESCRIPTORS:
* **hearing aid**

**23/3,K/9 (Item 7 from file: 73)**
DIALOG(R)File 73:EMBASE


06965989 EMBASE No: 1997250586
**Risk management of** electromagnetic **compatibility with medical devices**
Hocking B.
B. Hocking, 9 Tyrone Street, Camberwell, Vic. 3124 Australia
Journal of Occupational Health and Safety - Australia and New Zealand ( J. OCCUP. HEALTH SAF. AUST. NEW ZEALAND ) (Australia) 1997, 13/3 (239-242)
CODEN: JOHZE ISSN: 0815-6409
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 11

**Risk** management of electromagnetic **compatibility with medical devices**

This paper presents a risk management approach to managing the problems of **electromagnetic** compatibility to medical devices in the workplace and elsewhere. The diverse uses of the **electromagnetic** spectrum are noted and the increasing range of medical products which may be susceptible to **interference** are described. Risk analysis and assessment issues are illustrated. Finally, some principles of risk control...
MEDICAL DESCRIPTORS:
* **electromagnetic** radiation; *medical instrumentation; *occupational safety; *risk assessment
article; artificial heart pacemaker; **hearing aid** ; human; nerve stimulation; occupational health; wheelchair; workplace

**23/3,K/10 (Item 8 from file: 73)**
DIALOG(R)File 73:EMBASE


06872743 EMBASE No: 1997157071
**Mechanical, acoustic and** electromagnetic **evaluation of the semi-implantable middle ear** hearing device **(SIMEHD)**
Abbass H.A.; Kane M.; Garverick S.; Ko W.H.; Maniglia A.J.; Frenz W.; Falk T.J.
Dr. A.J. Maniglia, 11100 Euclid Avenue, Cleveland, OH 44106 United States

Ear, Nose and Throat Journal ( EAR NOSE THROAT J. ) (United States) 1997
, 76/5 (321-327)
CODEN: ENTJD ISSN: 0145-5613
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 7

**Mechanical, acoustic and** electromagnetic **evaluation of the semi-implantable middle ear** hearing device **(SIMEHD)**

The properties of the partially implantable middle ear **hearing device** (SIMEHD) were extensively studied. The internal unit was subjected to 5,000 cycle of bending...
...is too small to cause any damage to the ossicular chain. The force resulting from **electromagnetic interference** over a wide frequency range (500 Khz -I Giga (10sup 9) Hz) was measured and...
MEDICAL DESCRIPTORS:
* **hearing aid**
acoustics; article; **electromagnetic** field; force; mechanical stress

**23/3,K/11 (Item 9 from file: 73)**
DIALOG(R)File 73:EMBASE


06257267 EMBASE No: 1995292412
**A pathway for information transmission to the ear**
Bento R.F.; Miniti A.; Sanchez T.G.; Leiner A.; Nunes C.A.
Rua Pedroso Alvarenga 1255,22 Sao Paulo 04531-012 Brazil
Ear, Nose and Throat Journal ( EAR NOSE THROAT J. ) (United States) 1995
, 74/9 (640-644)
CODEN: ENTJD ISSN: 0145-5613
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...either transcutaneously via radiofrequency or percutaneously by connector coupling. Whereas the former is sensitive to **electromagnetic interference** , the latter increases the risk of infection. To overcome these disadvantages, an infrared (IR) system...
MEDICAL DESCRIPTORS:
*cochlea prosthesis; * **hearing aid** ; * **hearing** loss--rehabilitation--rh; *hearing loss--therapy--th

**23/3,K/12 (Item 1 from file: 155)**
DIALOG(R)File 155:MEDLINE(R)


09552175 21333371 PMID: 11440316
**The European experience.**
Bisgaard N
GN Resound, Taastrup, Denmark.
Journal of the American Academy of Audiology (Canada) Jun 2001, 12
(6) p296-300, ISSN 1050-0545 Journal Code: 9114646
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... in Europe as seen by the European Hearing Instrument Manufacturers

Association. Initial fear of widespread **interference** problems for **hearing aid** users in general owing to use of a new generation of mobile telephones seems unjustified. The background for the International Electrotechnical Commission 118-13 standard for measuring **interference** is described. No solution to complete elimination of **interference** problems resulting from direct contact between hearing aids and mobile telephones has yet been found...

; **Electromagnetics** ; Europe

?

Access DB# 112338

(64)

# SEARCH REQUEST FORM

**Scientific and Technical Information Center**

Requester's Full Name: Suhan Ni Examiner #: 72566 Date: 1/16/04

Art Unit: 2643 Phone Number 30- 703-308-9323 Serial Number: 09/502,258

Mail Box and Bldg/Room Location: PK2 8345 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: 02-11-2003

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

outside and converter of the electromagnetic shielding case

**********

1-16-04 12:40 PM

**STAFF USE ONLY**

Searcher: Pamela Reynolds

Searcher Phone #: 306 0255

Searcher Location: PK2 3603

Date Searcher Picked Up: 1-27-04 3:00

Date Completed: 1-27-04 3PM

Searcher Prep & Review Time: 30

Clerical Prep Time: _____

Online Time: 68

**Type of Search**

| | |
|---|---|
| NA Sequence (#) | |
| AA Sequence (#) | |
| Structure (#) | |
| Bibliographic | ✓ |
| Litigation | |
| Fulltext | ✓ |
| Patent Family | |
| Other | |

**Vendors and cost where applicable**

STN _____

Dialog ✓

Questel/Orbit _____

Dr.Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet ✓

Other (specify) ✓

PTO-1590 (8-01)